The claims defining the invention are as follows:

1. A method of halftoning an image, said method comprising steps of:

determining an output value of a current pixel on a current scanline using a sum

of an input value for the current pixel and a neighbourhood error value at the current

pixel;

determining an error at the current pixel as the difference between (i) the sum of

the input value for the current pixel and the neighbourhood error value at the current

pixel, and (ii) the output value of the current pixel; and

adding a proportion of the error at the current pixel to neighbourhood error

values at as yet unprocessed pixels of a subsequent scanline in accordance with a next

scanline error impulse response; wherein said next scanline error impulse response:

approximates a function which spreads with self-convolution in proportion to a

degree of self-convolution.

2. A method of halftoning according to claim 1, wherein:

the next scanline error impulse response is a member of a plurality of next

scanline error impulse responses, each of said plurality of next scanline error impulse

responses approximating a function which spreads with self-convolution in proportion to

the degree of self-convolution;

each said member of said plurality of next scanline error impulse responses is

associated with a corresponding error diffusion mask; and

a corresponding size of each said error diffusion mask depends upon a grey value

of a region to which said mask is applied.